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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/026,270	12/21/2001	Robert E. Bicking	M10-02466 US	8047

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[REDACTED] EXAMINER

WELLS, KENNETH B

[REDACTED] ART UNIT

[REDACTED] PAPER NUMBER

2816

DATE MAILED: 01/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/026,270	BICKING, ROBERT E.
	Examiner	Art Unit
	Kenneth B. Wells	2816

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 05 March 2002.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.
- Disposition of Claims**
- 4) Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-29 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>4</u> . | 6) <input type="checkbox"/> Other: _____ . |

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1. Claims 1-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, it appears that the steps of "applying the offset correction voltage" and "compensating the voltage at the noninverting input" are actually the same step. It is not clear how these two steps are separate from each other, or how they would both read on the disclosed embodiments. Moreover, the step of "compensating" on the last four lines of claim 1 does not appear to be a step at all, but rather just the end result of the actual steps of the invention.

In claim 3, it appears that the step on lines 3-4 has already been set forth in claim 1 at lines 3-4? Are these two steps the same thing? The same is true for the step at lines 5-6 of claim 3. Also in claim 3, as well as claim 29, the recitation of a temperature compensator is not understood because this (element?) is not seen in the disclosed embodiments. Is this just an effect of the other element(s) such as the magnetoresistors?

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In claim 4, to recite an "equivalent" magnetoresistor makes no sense, i.e., equivalent to what? Note the same problem in claim 18.

In claims 4-8, it appears to be misdescriptive to recite that the magnetoresistors are part of the signal conditioning circuit (because claim 1 implies that the signal conditioning circuit is just amplifier 82 in instant Fig. 1). What circuitry constitutes the signal conditioning circuit?

In claim 11, it makes no sense to recite that the magnetoresistor and at least one resistor are "located in" an inverting input of the amplifier. Also in claims 11 and 28, the term "associated" is vague and indefinite, i.e., associated how? Included therein? Connected thereto? The same problem exists for the magnet recited on the last two lines. Associated how? Is the magnet part of the signal conditioning circuit? Or is it an intended use?

In claims 12 and 26, "low" is a relative term that has not been defined in the claims or the specification and thus it cannot be determined how low (or high) the temperature coefficient would have to be in order to be within the scope of these claims.

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In claim 13, it cannot be determined what is meant by a "flat resultant temperature coefficient." Applicant should amend claim 13 to make this more clear.

Claims 14-26 are seen to have the same types of problems noted above with regard to claims 1-13 and should be amended as well in response to this office action. As a minor point, in claim 25, line 1, "further comprising" should be changed to --wherein--, and in claim 29, the structural and/or functional connections between the recited elements need to be set forth.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

- (e) the invention was described in-
 - (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
 - (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).
- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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Claims 1, 3-8, 14, 15 and 18-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Kunde et al.

Note Fig. 4, where the recited steps of "offset correction" and/or "compensating a voltage at the noninverting input" are performed by the resistors 24, and the magnetoresistor half-bridge signal is provided by circuits 14 and 15.

3. Claims 1-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Nelson.

Note Fig. 6, where the magnetoresistors are elements RM1 through RM4, and the offset voltage is provided by resistors R1 and R2. Also note the discussion of temperature compensation throughout the reference.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2, 11, 16 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kunde et al.

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The use of InSb as the material for forming the magnetoresistors would have been obvious to those having ordinary skill in the art who know that this is a typical material for making magnetoresistors, of which fact official notice is taken.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth B. Wells whose telephone number is 703-308-4809. The examiner can normally be reached on Monday through Friday from 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy P. Callahan, can be reached at 703-308-4876. The fax phone numbers for TC2800 are 703-872-9318 (before final) and 703-872-9319 (after final).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is 703-308-0956.


Kenneth B. Wells
Primary Examiner
Art Unit 2816

January 27, 2003